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☐	L1	ATPase with compar$	515

END OF SEARCH HISTORY

L2: Entry 32 of 243 File: USPT Mar 29, 2005

US-PAT-NO: 6872537
DOCUMENT-IDENTIFIER: US 6872537 B1

TITLE: Assays for the detection of microtubule depolymerization inhibitors

DATE-ISSUED: March 29, 2005

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
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US-CL-CURRENT: 435/7.1; 435/283.1, 435/287.1, 435/4, 435/7.4, 435/7.5, 435/7.92, 436/164, 436/166, 436/172, 436/86, 530/350, 530/386, 530/387.1

CLAIMS:

What is claimed is:

1. A method of identifying a test agent that modulates at least one activity selected from the group consisting of microtubule depolymerization, microtubule polymerization and microtubule severing, said method comprising the steps of: (i) contacting a polymerized microtubule with at least one protein selected from the group consisting of a microtubule severing protein and a microtubule depolymerizing protein, in the presence of ATP or GTP, and said test agent; and (ii) detecting the formation of at least one product selected from the group consisting of tubulin monomers, dimers and oligomers, wherein the formation of said tubulin monomers, dimers, or oligomers indicates that said test agent modulates microtubule depolymerization.

2. The method of claim 1, wherein said polymerized microtubule is labeled with 4'-6-diamidino-2-phenylindole (DAPI).

3. The method of claim 1, wherein said detecting is by fluorescent resonance energy transfer (FRET).

4. The method of claim 2, wherein said detecting, comprising detecting a change in fluorescence of said labeled microtubule.

5. The method of claim 1, wherein said detecting comprises centrifuging said tubulin monomers if present.

6. The method of claim 1, wherein said microtubules are stabilized by contact with an agent selected from the group consisting of paclitaxel, a paclitaxel analogue, and a non-hydrolyzable nucleotide GTP analogue.

7. The method of claim 1, wherein said microtubule is attached to a solid

surface.

8. The method of claim 7, wherein said microtubule is attached to said surface by binding with an agent selected from the group consisting of an inactivated microtubule motor protein, an avidin-biotin linkage, an anti-tubulin antibody, a microtubule binding protein (MAP), and a polylysine.

9. The method of claim 1, wherein said microtubule severing protein or microtubule depolymerizing protein is selected from the group consisting of katanin polypeptide, p60 subunit of katanin polypeptide, Xenopus kinesin central motor 1 (XKCM1) polypeptide, and stathmin (OP18) polypeptide.

10. The method of claim 9, wherein said microtubule severing protein is katanin polypeptide or p60 subunit of katanin polypeptide.

11. The method of claim 10, wherein said p60 subunit of a katanin is a polypeptide having microtubule severing activity, wherein said polypeptide comprises an isolated p60 subunit of katanin, and wherein said p60 subunit is encoded by a nucleic acid that hybridizes with a nucleic acid encoding the amino acid of SEQ ID NO:1, when incubated at 42.degree. C. overnight in 50% formamide.

12. The method of claim 10, wherein said p60 subunit is a polypeptide having the amino acid sequence of SEQ ID NO:1.

13. The method of claim 1, wherein said method is performed in an array where said array comprises a multiplicity of reaction mixtures, each reaction mixture comprising a distinct and distinguishable domain of said array, and wherein said steps are performed in each reaction mixture.

14. The method of claim 13, wherein said array comprises a microtitre plate.

15. The method of claim 13, wherein said array comprises at least 48 of said reaction mixtures.

16. The method of claim 13, wherein said test agent is one of a plurality of test agents and wherein each reaction mixture comprises one test agent of said plurality of test agents.

17. A method of identifying a therapeutic lead compound that modulates at least one activity selected from the group consisting of depolymerization, polymerization, and severing of a microtubule system, said method comprising the steps of: i) providing an assay mixture comprising a katanin p60 subunit and a microtubule; ii) contacting said assay mixture with a test agent to be screened for the ability to inhibit or enhance the microtubule severing or ATPase activity of said p60 subunit; and iii) detecting at least one of specific binding of said test compound to said p60 subunit and a change in the ATPase activity of said p60 subunit.

18. The method of claim 17, wherein said detecting comprises detecting ATPase activity utilizing malachite green as a detection reagent.

19. The method of claim 17, wherein said p60 subunit is labeled and said test agent is attached to a solid support.

20. The method of claim 17, wherein said test agent is labeled and said p60 subunit is attached to a solid support.

21. The method of claim 17, wherein said microtubules are stabilized by contact with an agent selected from the group consisting of paclitaxel, a paclitaxel analogue, and a non-hydrolyzable nucleotide GTP analogue.

22. The method of claim 17, wherein said method is performed in an array where said array comprises a multiplicity of reaction mixtures, each reaction mixture comprising a distinct and distinguishable domain of said array, and wherein said steps are performed in each reaction mixture.

23. The method of claim 22, wherein said array comprises a microtitre plate.

24. The method of claim 22, wherein said array comprises at least 48 of said reaction mixtures.

25. The method of claim 22, wherein said test agent comprises one of a plurality of test agents and wherein each reaction mixture comprises one test agent of said plurality of test agents.

26. A method of screening for a test agent that alters at least one activity selected from the group consisting of microtubule polymerization, microtubule depolymerization, and microtubule severing, said method comprising: a) providing: i) labeled tubulin, ii) an isolated polypeptide having at least one activity selected from the group consisting of microtubule polymerization activity, microtubule depolymerization activity, and microtubule severing activity, said polypeptide comprising a katanin p60 subunit, and iii) a test agent; b) contacting said labeled tubulin with said isolated polypeptide and with said test agent to produce contacted tubulin; and c) comparing the fluorescence intensity or pattern of said contacted tubulin with the fluorescence intensity or pattern of labeled tubulin that is not contacted with said polypeptide and said test agent, wherein a difference in fluorescence pattern or intensity between the contacted and the not contacted tubulin indicates that said test agent alters at least one activity selected from the group consisting of microtubule polymerization, microtubule depolymerization, and microtubule severing.

27. The method of claim 26, wherein said labeled tubulin is in at least one form selected from the group consisting of tubulin monomers, tubulin dimers, and tubulin oligomers.

28. The method of claim 26, wherein said labeled tubulin is in the form of a microtubule.

29. The method of claim 28, wherein said microtubule is attached to a solid surface.

30. The method of claim 29, wherein said microtubule is attached to said surface by binding with a molecule selected from the group consisting of an inactivated microtubule motor protein, an avidin-biotin linkage, an anti-tubulin antibody, a microtubule binding protein (MAP), a polyarginine, a polyhistidine, and a polylysine.

31. The method of claim 28, wherein the label of said labeled tubulin is selected from the group consisting of 4'-6-diamidino-2-phenylindole (DAPI), anilinonapthalene sulfonate (ANS), bis-ANS (Bis-anilinonapthalene sulfonate), N-phenyl-1-naphthylene (NPN), ruthernium red, cresol violet, and 4-(dicyanovinyl)julolidine (DCVJ).

32. The method of claim 28, wherein the label of said labeled tubulin is 4'-6-diamidino-2-phenylindole (DAPI).

33. The method of claim 26, wherein said katanin p60 subunit is recombinant.

34. The method of claim 26, wherein said katanin p60 subunit has the amino acid sequence of SEQ ID NO:1.

35. The method of claim 26, wherein said method is performed in an array, wherein said array comprises a multiplicity of reaction mixtures.

36. The method of claim 35, wherein said array comprises a microtitre plate.

37. The method of claim 35, wherein said array comprises at least 48 of said reaction mixtures.

38. The method of claim 26, further comprising step d) listing the test agents that alter at least one of microtubule polymerization, microtubule depolymerization, and microtubule severing into a database.

39. A method of screening for a test agent that alters at least one activity selected from the group consisting of microtubule polymerization, microtubule depolymerization, and microtubule severing, said method comprising: a) providing: i) labeled tubulin, ii) an isolated katanin p60 subunit, and iii) a test agent; b) contacting said labeled tubulin with said isolated katanin p60 subunit and with said test agent to produce contacted tubulin; and c) comparing the fluorescence intensity or pattern of said contacted tubulin with the fluorescence intensity or pattern of labeled tubulin that is not contacted with said polypeptide and said test agent, wherein a difference in fluorescence pattern or intensity between the contacted and the not contacted tubulin indicates that said test agent alters at least one activity selected from the group consisting of microtubule polymerization, microtubule depolymerization, and microtubule severing.

40. The method of claim 39, wherein said labeled tubulin is in at least one form selected from the group consisting of tubulin monomers, tubulin dimers, and tubulin oligomers.

41. The method of claim 39, wherein said labeled tubulin is in the form of a microtubule.

42. The method of claim 41, wherein said microtubule is attached to a solid surface.

43. The method of claim 42, wherein said microtubule is attached to said surface by binding with a molecule selected from the group consisting of an inactivated microtubule motor protein, an avidin-biotin linkage, an anti-tubulin antibody, a microtubule binding protein (MAP), a polyarginine, a polyhistidine, and a polylysine.

44. The method of claim 41, wherein the label of said labeled tubulin is selected from the group consisting of 4'-6-diamidino-2-phenylindole (DAPI), anilinonapthalene sulfonate (ANS), bis-ANS (Bis-anilinonapthalene sulfonate), N-phenyl-1-naphthylene (NPN), ruthernium red, cresol violet, and 4-(dicyanovinyl)julolidine (DCVJ).

45. The method of claim 41, wherein the label of said labeled tubulin is 4'-6-diamidino-2-phenylindole (DAPI).

46. The method of claim 39, wherein said katanin p60 subunit is recombinant.

47. The method of claim 39, wherein said katanin p60 subunit has the amino acid sequence of SEQ ID NO:1.

48. The method of claim 39, wherein said method is performed in an array, wherein said array comprises a multiplicity of reaction mixtures.

49. The method of claim 48, wherein said array comprises a microtitre plate.

50. The method of claim 48, wherein said array comprises at least 48 of said reaction mixtures.

51. The method of claim 39, further comprising step d) listing the test agents that alter at least one of microtubule polymerization, microtubule depolymerization, and microtubule severing into a database.

52. A method of screening for a test agent that alters at least one activity selected from the group consisting of microtubule polymerization and depolymerization, said method comprising: a) providing labeled tubulin; b) contacting said labeled tubulin with said test agent to produce contacted tubulin; and c) comparing the fluorescence intensity or pattern of said contacted tubulin with the fluorescence intensity or pattern of labeled tubulin that is not contacted with said test agent wherein a difference in fluorescence pattern or intensity between the contacted and the not contacted tubulin indicates that said test agent alters at least one activity selected from the group consisting of microtubule polymerization and depolymerization.

53. The method of claim 52, wherein said labeled tubulin is in at least one form selected from the group consisting of tubulin monomers, tubulin dimers, and tubulin oligomers.

54. The method of claim 52, wherein said labeled tubulin is in the form of a microtubule.

55. The method of claim 54, wherein said microtubule is attached to a solid surface.

56. The method of claim 54, wherein the label of said labeled tubulin is selected from the group consisting of 4'-6-diamidino-2-phenylindole (DAPI), anilinonapthalene sulfonate (ANS), bis-ANS (Bis-anilinonapthalene sulfonate), N-phenyl-1-naphthylene (NPN), ruthernium red, cresol violet, and 4-(dicyanovinyl)julolidine (DCVJ).

57. The method of claim 56, wherein said label is 4'-6-diamidino-2-phenylindole (DAPI).

58. The method of claim 55, wherein said microtubule is attached to said surface by binding with an agent selected from the group consisting of an inactivated microtubule motor protein, an avidin-biotin linkage, an anti-tubulin antibody, a microtubule binding protein (MAP), a polyarginine, a polyhistidine, and a polylysine.

59. A method of screening for a test agent that alters at least one activity selected from the group consisting of microtubule polymerization and depolymerization, said method comprising: a) providing: i) labeled tubulin, ii) a microtubule depolymerizing protein, and iii) a test agent; b) contacting said tubulin with said microtubule depolymerizing protein and with said test agent to produce contacted tubulin; and c) comparing the fluorescence intensity or pattern of said contacted tubulin with the fluorescence intensity or pattern of labeled tubulin that is not contacted with said test agent, wherein a difference in fluorescence pattern or intensity between the contacted and the not contacted tubulin indicates that said test agent alters at least one activity selected from the group consisting of microtubule polymerization and depolymerization.

60. The method of claim 59, wherein said microtubule depolymerizing protein comprises a Xenopus kinesin central motor 1 (XKCM1) polypeptide.

61. The method of claim 52, wherein said method is performed in an array where said array comprises a multiplicity of reaction mixtures, and wherein said steps are performed in each reaction mixture.

62. The method of claim 61, wherein said array comprises a microtitre plate.

63. The method of claim 61, wherein said array comprises at least 48 of said reaction mixtures.

64. The method of claim 61, wherein said test agent comprises a plurality of test agents and wherein each reaction mixture comprises one test agent of said plurality of test agents.

65. The method of claim 52, further comprising listing the test agents that alter at least one of microtubule polymerization and depolymerization into a database of therapeutic lead compounds that act on the cytoskeletal system.

66. The method of claim 59, wherein said labeled tubulin is in at least one form selected from the group consisting of tubulin monomers, tubulin dimers, and tubulin oligomers.

67. The method of claim 59, wherein said labeled tubulin is in the form of a microtubule.

68. The method of claim 67, wherein said microtubule is attached to a solid surface.

69. The method of claim 67, wherein the label of said labeled tubulin is selected from the group consisting of 4'-6-diamidino-2-phenylindole (DAPI), anilinonapthalene sulfonate (ANS), bis-ANS (Bis-anilinonapthalene sulfonate), N-phenyl-1-naphthylene (NPN), ruthernium red, cresol violet, and 4-(dicyanovinyl)julolidine (DCVJ).

70. The method of claim 69, wherein said label is 4'-6-diamidino-2-phenylindole (DAPI).

71. The method of claim 68, wherein said microtubule is attached to said surface by binding with an agent selected from the group consisting of an inactivated microtubule motor protein, an avidin-biotin linkage, an anti-tubulin antibody, a microtubule binding protein (MAP), a polyarginine, a

polyhistidine, and a polylysine.

72. The method of claim 59, wherein said method is performed in an array, wherein said array comprises a multiplicity of reaction mixtures, and wherein said steps are performed in each reaction mixture.

73. The method of claim 72, wherein said array comprises a microtitre plate.

74. The method of claim 72, wherein said array comprises at least 48 of said reaction mixtures.

75. The method of claim 72, wherein said test agent comprises a plurality of test agents, and wherein each reaction mixture comprises one test agent of said plurality of test agents.

76. The method of claim 59, further comprising listing the test agents that alter at least one of microtubule polymerization and depolymerization into a database of therapeutic lead compounds that act on the cytoskeletal system.

77. The method of claim 59, wherein said microtubule depolymerizing protein is a Xenopus kinesin central motor 1 (XKCM1) polypeptide.

78. A method of screening for a test agent that alters at least one activity selected from the group consisting of microtubule polymerization and depolymerization, said method comprising: a) providing: i) labeled tubulin, ii) a microtubule depolymerizing protein comprising a stathmin polypeptide, and iii) a test agent; b) contacting said labeled tubulin with said microtubule depolymerizing protein and with said test agent to produce contacted tubulin; and c) comparing the fluorescence intensity or pattern of said contacted tubulin with the fluorescence intensity or pattern of labeled tubulin that is not contacted with said test agent, wherein a difference in fluorescence pattern or intensity between the contacted and the not contacted tubulin indicates that said test agent alters at least one activity selected from the group consisting of microtubule polymerization and depolymerization.

79. The method of claim 78, wherein said method is performed in an array where said array comprises a multiplicity of reaction mixtures, and wherein said steps are performed in each reaction mixture.

80. The method of claim 79, wherein said array comprises a microtitre plate.

81. The method of claim 79, wherein said array comprises at least 48 of said reaction mixtures.

82. The method of claim 79, wherein said test agent comprises a plurality of test agents and wherein each reaction mixture comprises one test agent of said plurality of test agents.

83. The method of claim 78, further comprising listing the test agents that alter at least one of microtubule polymerization and depolymerization into a database of therapeutic lead compounds that act on the cytoskeletal system.

84. The method of claim 78, wherein said labeled tubulin is in at least one form selected from the group consisting of tubulin monomers, tubulin dimers, and tubulin oligomers.

85. The method of claim 78, wherein said labeled tubulin is in the form of a microtubule.

86. The method of claim 85, wherein said microtubule is attached to a solid surface.

87. The method of claim 85, wherein the label of said labeled tubulin is selected from the group consisting of 4'-6-diamidino-2-phenylindole (DAPI), anilinonapthalene sulfonate (ANS), bis-ANS (Bis-anilinonapthalene sulfonate), N-phenyl-1-naphthylene (NPN), ruthernium red, cresol violet, and 4-(dicyanovinyl)julolidine (DCVJ).

88. The method of claim 87, wherein said label is 4'-6-diamidino-2-phenylindole (DAPI).

89. The method of claim 86, wherein said microtubule is attached to said surface by binding with an agent selected from the group consisting of an inactivated microtubule motor protein, an avidin-biotin linkage, an anti-tubulin antibody, a microtubule binding protein (MAP), a polyarginine, a polyhistidine, and a polylysine.

90. The method of claim 78, wherein said microtubule depolymerizing protein is a stathmin polypeptide.

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☐ 1. Document ID: US 20050233428 A1

L4: Entry 1 of 19 File: PGPB Oct 20, 2005

PGPUB-DOCUMENT-NUMBER: 20050233428
PGPUB-FILING-TYPE: new
DOCUMENT-IDENTIFIER: US 20050233428 A1

TITLE: Method of affinity purifying proteins using modified bis-arsenical fluorescein

PUBLICATION-DATE: October 20, 2005

INVENTOR-INFORMATION:

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NAME	CITY	STATE	COUNTRY	TYPE CODE
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APPL-NO: 11/012853 [PALM]
DATE FILED: December 14, 2004

RELATED-US-APPL-DATA:
Application 11/012853 is a continuation-of US application 09/502664, filed February 11, 2000, US Patent No. 6831160
Application is a non-provisional-of-provisional application 60/178054, filed January 24, 2000,

INT-CL-PUBLISHED: [07] C12 N 9/00, C12 P 21/06

US-CL-PUBLISHED: 435/183
US-CL-CURRENT: 435/183

REPRESENTATIVE-FIGURES: NONE

ABSTRACT:

The present invention features methods for purifying polypeptides of interest using a modified Fluorescein arsenical helix binder (FlAsH) compound immobilized on a solid support. An exemplary FlAsH target sequence motif is also presented. Examples of modification of the FlAsH compound which allow immobilization to a solid support are also provided. The present invention also provides DNA constructs for producing a dual affinity tagged polypeptide and methods for purification thereof.

CROSS REFERENCE TO RELATED APPLICATION(S)

[0001] This application claims priority under 35 USC 119(e)(1) to U.S. Provisional Patent application Ser. No. 60/178,054, filed on Jan. 24, 2000, incorporated herein in its entirety.

☐ 2. Document ID: US 20050164230 A1

L4: Entry 2 of 19 File: PGPB Jul 28, 2005

PGPUB-DOCUMENT-NUMBER: 20050164230
PGPUB-FILING-TYPE: new
DOCUMENT-IDENTIFIER: US 20050164230 A1

TITLE: Assays for the detection of microtubule depolymerization inhibitors

PUBLICATION-DATE: July 28, 2005

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY
Vale, Ronald D.	San Francisco	CA	US
Hartman, James J.	San Francisco	CA	US

APPL-NO: 10/927588 [PALM]
DATE FILED: August 25, 2004

RELATED-US-APPL-DATA:
Application 10/927588 is a division-of US application 09/673222, filed December 4, 2000, US Patent No. 6872537
Application 09/673222 is a a-371-of-international WO application PCT/US99/08086, filed April 13, 1999, PENDING
Application is a non-provisional-of-provisional application 60/081734, filed April 14, 1998,

INT-CL-PUBLISHED: [07] C12 Q 1/68, G01 N 33/574, A61 K 31/337

US-CL-PUBLISHED: 435/006; 435/007.23, 514/449
US-CL-CURRENT: 435/6; 435/7.23, 514/449

REPRESENTATIVE-FIGURES: NONE

ABSTRACT:

This invention provides methods for the screening and identification of agents

having potent effects on the progression of the cell cycle. In one embodiment, the methods involve contacting a polymerized microtubule with a microtubule severing protein or a microtubule depolymerizing protein in the presence of an ATP or a GTP and a test agent; and (ii) detecting the formation of tubulin monomers, dimers or oligomers. The p60 subunit of katanin provides a particularly preferred microtubule severing protein possessing both ATPase and microtubule severing activities.

CROSS-REFERENCE TO RELATED APPLICATIONS

[0001] This application claims benefit under 35 U.S.C. .sctn. 119(e) of provisional patent U.S. Ser. No. 60/081,734, filed on Apr. 14, 1998, which is herein incorporated by reference in its entirety for all purposes.

STATEMENT AS TO RIGHTS TO INVENTIONS MADE UNDER FEDERALLY SPONSORED RESEARCH AND DEVELOPMENT

[0002] [Not Applicable]

☐ 3. Document ID: US 20040161784 A1

L4: Entry 3 of 19 File: PGPB Aug 19, 2004

PGPUB-DOCUMENT-NUMBER: 20040161784
PGPUB-FILING-TYPE: new
DOCUMENT-IDENTIFIER: US 20040161784 A1

TITLE: Assays for the detection of microtubule depolymerization inhibitors

PUBLICATION-DATE: August 19, 2004

INVENTOR-INFORMATION:

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ASSIGNEE-INFORMATION:

NAME	CITY	STATE	COUNTRY	TYPE CODE
The Regents of the University of California				02

APPL-NO: 10/761781 [PALM]
DATE FILED: January 20, 2004

RELATED-US-APPL-DATA:
Application 10/761781 is a continuation-of US application 09/673222, filed December 4, 2000, PENDING
Application 09/673222 is a a-371-of-international WO application PCT/US99/08086, filed April 13, 1999, PENDING
Application is a non-provisional-of-provisional application 60/081734, filed April 14, 1998,

INT-CL-PUBLISHED: [07] C12 Q 1/68, G01 N 33/53

US-CL-PUBLISHED: 435/006; 435/007.5
US-CL-CURRENT: 435/6; 435/7.5

REPRESENTATIVE-FIGURES: NONE

ABSTRACT:

This invention provides methods for the screening and identification of agents having potent effects on the progression of the cell cycle. In one embodiment, the methods involve contacting a polymerized microtubule with a microtubule severing protein or a microtubule depolymerizing protein in the presence of an ATP or a GTP and a test agent; and (ii) detecting the formation of tubulin monomers, dimers or oligomers. The p60 subunit of katanin provides a particularly preferred microtubule severing protein possessing both ATPase and microtubule severing activities.

CROSS-REFERENCE TO RELATED APPLICATIONS

[0001] This application claims benefit under 35 U.S.C. .sctn.119(e) of provisional patent U.S.SNo. 60/081,734, filed on Apr. 14, 1998, which is herein incorporated by reference in its entirety for all purposes.

☐ 4. Document ID: US 6872537 B1

L4: Entry 4 of 19 File: USPT Mar 29, 2005

US-PAT-NO: 6872537
DOCUMENT-IDENTIFIER: US 6872537 B1

TITLE: Assays for the detection of microtubule depolymerization inhibitors

DATE-ISSUED: March 29, 2005

INVENTOR-INFORMATION:

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APPL-NO: 09/673222 [PALM]
DATE FILED: December 4, 2000

PARENT-CASE:
CROSS-REFERENCE TO RELATED APPLICATIONS This application claims benefit under 35 U.S.C. .sctn. 119(e) of provisional patent U.S. Ser. No. 60/081,734, filed on Apr. 14, 1998, which is herein incorporated by reference in its entirety for all purposes.

PCT-DATA:

APPL-NO	DATE-FILED	PUB-NO	PUB-DATE	371-DATE
PCT/US99/08086	April 13, 1999	WO99/53295	Oct 21, 1999	Dec 4, 2000

INT-CL-ISSUED: [07] G01 N 33/53, G01 N 33/573, G01 N 33/537, G01 N 33/543, C12 Q 1/00

US-CL-ISSUED: 435/7.1; 435/4, 435/7.4, 435/7.5, 435/7.92, 435/283.1, 435/287.1, 436/86, 436/164, 436/166, 436/172, 530/350, 530/386, 530/387.1
US-CL-CURRENT: 435/7.1; 435/283.1, 435/287.1, 435/4, 435/7.4, 435/7.5, 435/7.92, 436/164, 436/166, 436/172, 436/86, 530/350, 530/386, 530/387.1

FIELD-OF-CLASSIFICATION-SEARCH: 435/47, 435/7.4, 435/7.5, 435/7.92, 435/283.1, 435/287.1, 436/86, 436/164, 436/166, 436/172, 530/350, 530/386, 530/387.1
See application file for complete search history.

PRIOR-ART-DISCLOSED:

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WO 97/00271	January 1997	WO

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Genbank Accession No. L25423, Mar. 3, 1994.
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Genbank Accession No. T16192, Jul. 25, 1996.

ART-UNIT: 1642

PRIMARY-EXAMINER: Harris; Alana M.

ATTY-AGENT-FIRM: Medlen & Carroll, LLP

ABSTRACT:

This invention provides methods for the screening and identification of agents having potent effects on the progression of the cell cycle. In one embodiment, the methods involve contacting a polymerized microtubule with a microtubule severing protein or a microtubule depolymerizing protein in the presence of an ATP or a GTP and a test agent; and (ii) detecting the formation of tubulin monomers, dimers or oligomers. The p60 subunit of katanin provides a particularly preferred microtubule severing protein possessing both ATPase and microtubule severing activities.

90 Claims, 20 Drawing figures

Full | Title | Citation | Front | Review | Classification | Date | Reference | | | Claims | KWIC | Draw D

☐ 5. Document ID: US 6831160 B1

L4: Entry 5 of 19 File: USPT Dec 14, 2004

US-PAT-NO: 6831160
DOCUMENT-IDENTIFIER: US 6831160 B1
**** See image for Certificate of Correction ****

TITLE: Method of affinity purifying proteins using modified bis-arsenical fluorescein

DATE-ISSUED: December 14, 2004

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Vale; Ronald D.	San Francisco	CA		
Thorn; Kurt	San Francisco	CA		
Cooke;, Roger	San Francisco	CA		
Matsuka; Marija	San Francisco	CA		
Naber; Nariman	San Bruno	CA		

ASSIGNEE-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY	TYPE CODE
The Regents of the University of California	Oakland	CA			02

APPL-NO: 09/502664 [PALM]
DATE FILED: February 11, 2000

PARENT-CASE:
RELATED APPLICATIONS This application claims priority under 35 USC 119(e)(1) to U.S. Provisional Patent application Ser. No. 60/178,054, filed Jan. 24, 2000, incorporated herein in its entirety.

INT-CL-ISSUED: [07] A23 J 1/00

US-CL-ISSUED: 530/412; 530/412, 530/350, 530/300, 435/69.1, 435/7.9, 435/7.1, 549/207, 568/411, 562/324
US-CL-CURRENT: 530/412; 435/69.1, 435/7.1, 435/7.9, 530/300, 530/350, 549/207, 568/411

FIELD-OF-CLASSIFICATION-SEARCH: 549/207, 568/411, 562/324, 435/69.1, 435/7.9, 435/7.1, 530/300, 530/350, 530/412
See application file for complete search history.

PRIOR-ART-DISCLOSED:

U.S. PATENT DOCUMENTS

PAT-NO	ISSUE-DATE	PATENTEE-NAME	US-CL
5264557	November 1993	Salomon et al.	530/399
5415999	May 1995	Saul et al.	435/709
5932474	August 1999	Tsien et al.	435/320.1
6008378	December 1999	Tsien et al.	549/207

OTHER PUBLICATIONS

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Griffen, B. Albert, "Specific Covalent Labeling of Recominant Protein Molecules Inside Live Cells," Science, vol. 281, Jul. 10, 1998, pp. 269-272.
Luebke, Kevin J., "A FLASH of Insight into Cellular Chemistry: Genetically Encoded Labels for Protein Visualization In Vivo," Chemistry & Biology, vol. 5, No. 12, 1998, pp. R317-R322.

ART-UNIT: 1653

PRIMARY-EXAMINER: Low; Christopher S. F.

ASSISTANT-EXAMINER: Robinson; Hope A.

ATTY-AGENT-FIRM: Gray Cary Ware & Freidenrich, LLP

ABSTRACT:

The present invention features methods for purifying polypeptides of interest using a modified Fluorescein arsenical helix binder (FlAsH) compound immobilized on a solid support. An exemplary FlAsH target sequence motif is also presented. Examples of modification of the FlAsH compound which allow immobilization to a solid support are also provided. The present invention also provides DNA constructs for producing a dual affinity tagged polypeptide and methods for purification thereof.

19 Claims, 1 Drawing figures

☐ 6. Document ID: US 6779951 B1

L4: Entry 6 of 19 File: USPT Aug 24, 2004

US-PAT-NO: 6779951
DOCUMENT-IDENTIFIER: US 6779951 B1

TITLE: Drill insert using a sandwiched polycrystalline diamond compact and method of making the same

DATE-ISSUED: August 24, 2004

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Vale; Roger	Sandy	UT		
Miess; David	Highland	UT		

ASSIGNEE-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY	TYPE CODE
U.S. Synthetic Corporation	Orem	UT			02

APPL-NO: 09/505315 [PALM]
DATE FILED: February 16, 2000

INT-CL-ISSUED: [07] B32 B 7/02, B23 B 27/14

US-CL-ISSUED: 407/119; 51/295, 428/698
US-CL-CURRENT: 407/119; 428/698, 51/295

FIELD-OF-CLASSIFICATION-SEARCH: 407/118, 407/119, 408/144, 408/145, 175/432, 175/433, 175/434, 175/435, 76/108.6, 76/108.1, 51/295, 51/293, 428/697, 428/698, 428/701
See application file for complete search history.

PRIOR-ART-DISCLOSED:

U.S. PATENT DOCUMENTS

PAT-NO	ISSUE-DATE	PATENTEE-NAME	US-CL
3767371	October 1973	Wentorf, Jr. et al.	51/307
4225322	September 1980	Knemeyer	51/295
4277106	July 1981	Sahley	299/111
4311490	January 1982	Bovenkerk et al.	51/307
4527643	July 1985	Horton et al.	175/329
4604106	August 1986	Hall et al.	51/293
4605343	August 1986	Hibbs et al.	407/119
4627503	December 1986	Horton	175/329
4714385	December 1987	Komanduri	407/119
4772294	September 1988	Schroeder	51/309
4797138	January 1989	Komanduri	51/293
4797326	January 1989	Csillag	428/552

4802539	February 1989	Hall et al.	175/329
4986788	January 1991	Jongin	445/50
5096465	March 1992	Chen et al.	51/295
5272940	December 1993	Diskin	76/108.6
5304342	April 1994	Hall, Jr. et al.	419/11
5370195	December 1994	Keshavan et al.	175/420.2
5492188	February 1996	Smith et al.	175/432
5554415	September 1996	Turchan et al.	427/248.1
5603070	February 1997	Cerutti et al.	419/6
5620754	April 1997	Turchan et al.	427/554
5643641	July 1997	Turchan et al.	427/595
5648127	July 1997	Turchan et al.	427/596
5650059	July 1997	Shumaker et al.	205/640
5679159	October 1997	Olson	118/500
5681653	October 1997	Hammond et al.	428/336
5709907	January 1998	Battaglia et al.	427/126.1
5722803	March 1998	Battaglia et al.	407/119
5731046	March 1998	Mistry et al.	427/553
5731079	March 1998	Hammond et al.	428/336
5766394	June 1998	Anderson et al.	156/89.11
5773140	June 1998	Cerutti et al.	428/332
5871850	February 1999	Moriguchi et al.	428/651
5882777	March 1999	Kukino et al.	428/216
5934842	August 1999	Gupta	407/40
5952102	September 1999	Cutler	428/408
6086959	July 2000	Inspektor	427/419
6117533	September 2000	Inspektor	428/216

ART-UNIT: 2183

PRIMARY-EXAMINER: Tsai; Henry W. H.

ATTY-AGENT-FIRM: Sadler; Lloyd W.

ABSTRACT:

A new drill insert product and the method of making the same are provided. This invention makes use of a multi-metal region bonded to the top (cutting) surface of a superabrasive layer to improve drill life, decrease the propensity for delamination and to avoid crack initiation sites in the drill insert product. This invention makes use of an inner can top composed essentially of niobium, which, under the compression pressure of an ultra high pressure press, bonds to a molybdenum disk, thereby providing improved tensile strength, abrasion resistance, bonding strength, as well as improved control over the cutting surface flatness. By using the inner can top, this invention improves process efficiency, while reducing manufacturing complexity and waste.

7 Claims, 3 Drawing figures

☐ 7. Document ID: US 6727416 B1

L4: Entry 7 of 19 File: USPT Apr 27, 2004

US-PAT-NO: 6727416
DOCUMENT-IDENTIFIER: US 6727416 B1

TITLE: Piano hammer adjustment apparatus and method for using same

DATE-ISSUED: April 27, 2004

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Vale; Raymond J.	San Antonio	TX	78240	

APPL-NO: 10/419420 [PALM]
DATE FILED: April 21, 2003

INT-CL-ISSUED: [07] G10 G 7/00

US-CL-ISSUED: 84/459; 84/458
US-CL-CURRENT: 84/459; 84/458

FIELD-OF-CLASSIFICATION-SEARCH: 84/459, 84/454, 84/458, 84/440, 84/432, 84/433, 84/434, 84/436
See application file for complete search history.

PRIOR-ART-DISCLOSED:

U.S. PATENT DOCUMENTS

PAT-NO	ISSUE-DATE	PATENTEE-NAME	US-CL
3696699	October 1972	Tachida	84/251
4686879	August 1987	Ito et al.	84/440
4896577	January 1990	Trivelas et al.	84/240
5565636	October 1996	Sugiyama	84/171
6087574	July 2000	Kitashima et al.	84/423R
6509517	January 2003	Wroblewski	84/216

ART-UNIT: 2837

PRIMARY-EXAMINER: Lockett; Kimberly

ATTY-AGENT-FIRM: White; Cline H. Jackson Walker LLP

ABSTRACT:

The present invention is an apparatus tuning and adjusting pianos. It maybe attached to the existing hammer shank and simulates a piano hammer. The present invention's dimensions and angles are adjustable. As the present invention is moved into strike position on the hammer shank, the multiple adjustments allow the piano technician to measure the characteristics needed to achieve the optimal strike point of the string. These measurements can then be used to correctly install the piano hammer and tune the piano.

11 Claims, 6 Drawing figures

☐ 8. Document ID: US 6699969 B1

L4: Entry 8 of 19 File: USPT Mar 2, 2004

US-PAT-NO: 6699969
DOCUMENT-IDENTIFIER: US 6699969 B1

TITLE: Assays for the detection of microtubule depolymerization inhibitors

DATE-ISSUED: March 2, 2004

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Vale; Ronald D.	San Francisco	CA		
Hartman; James J.	San Francisco	CA		

ASSIGNEE-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY	TYPE CODE
The Regents of the University of California	Oakland	CA			02

APPL-NO: 09/724592 [PALM]
DATE FILED: November 28, 2000

PARENT-CASE:
CROSS-REFERENCE TO RELATED APPLICATIONS This is a Continuation of copending Application Ser. No. 09/673,222, filed Oct. 13, 2000, which is the U.S. National stage entry filing, and which claims the benefit under 35 U.S.C. .sctn.119(e), of PCT/US99//08086, filed Apr. 13, 1999 which claims priority to U.S. Provisional Patent Application Serial No. 60/081,734, filed Apr. 14, 1998, now abandoned, which is herein incorporated by reference in its entirety.

INT-CL-ISSUED: [07] C07 K 17/00, C12 Q 1/00

US-CL-ISSUED: 530/350; 435/4
US-CL-CURRENT: 530/350; 435/4

FIELD-OF-CLASSIFICATION-SEARCH: 435/4, 435/7.1, 435/7.4, 435/7.5, 435/7.92, 435/283.1, 435/281.1, 436/81, 436/164, 436/166, 436/172, 436/518, 530/350
See application file for complete search history.

PRIOR-ART-DISCLOSED:

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5519134	May 1996	Acevedo et al.	
5525735	June 1996	Gallop et al.	
5539083	July 1996	Cook et al.	
5541061	July 1996	Fodor et al.	
5549974	August 1996	Holmes	
5559410	September 1996	Papazian et al.	
5569588	October 1996	Ashby et al.	
5576220	November 1996	Hudson et al.	
5585639	December 1996	Dorsel et al.	
5593853	January 1997	Chen et al.	
6083763	July 2000	Balch	436/518

FOREIGN PATENT DOCUMENTS

FOREIGN-PAT-NO	PUBN-DATE	COUNTRY	CLASS
WO 91/19735	December 1991	WO	
WO 92/00091	January 1992	WO	
WO 93/20242	October 1993	WO	
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ART-UNIT: 1648

PRIMARY-EXAMINER: Housel; James

ASSISTANT-EXAMINER: Foley; Shanon

ATTY-AGENT-FIRM: Medlen & Carroll LLP

ABSTRACT:

This invention provides assays for agents that modulate (e.g. upregulate, downregulate or completely inhibit) microtubule depolymerizing or microtubule severing proteins. Such agents will have profound effects on progression of the cell cycle and act as potent anti-mitotic agents. The microtubule severing protein or microtubule depolymerizing protein is preferably a katanin, a p60 subunit of a katanin, an XKCM 1, or an OP18 polypeptide.

16 Claims, 20 Drawing figures

☐ 9. Document ID: US 6429304 B1

L4: Entry 9 of 19 File: USPT Aug 6, 2002

US-PAT-NO: 6429304
DOCUMENT-IDENTIFIER: US 6429304 B1
**** See image for Certificate of Correction ****

TITLE: Nucleic acids encoding a katanin p60 subunit

DATE-ISSUED: August 6, 2002

INVENTOR-INFORMATION:

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Vale; Ronald D.	San Francisco	CA		
Hartman; James J.	San Francisco	CA		

ASSIGNEE-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY	TYPE CODE
The Regents of the University of California	Oakland	CA			02

APPL-NO: 09/724884 [PALM]
DATE FILED: November 28, 2000

PARENT-CASE:
CROSS-REFERENCE TO RELATED APPLICATIONS This application is a divisional of U.S. application Ser. No. 09/291,170, filed Apr. 13, 1999, which claims benefit under 35 U.S.C. .sctn.119(e) of provisional patent U.S. Ser. No. 60/081,734, filed on Apr. 14, 1998, which is herein incorporated by reference in its entirety for all purposes.

INT-CL-ISSUED: [07] C07 H 21/02, C07 H 21/04, C12 N 1/21, C12 N 15/63

US-CL-ISSUED: 536/23.5; 536/23.1, 536/24.31, 536/24.33, 435/320.1, 435/325, 435/348, 435/252.3
US-CL-CURRENT: 536/23.5; 435/252.3, 435/320.1, 435/325, 435/348, 536/23.1, 536/24.31, 536/24.33, 977/804

FIELD-OF-CLASSIFICATION-SEARCH: 536/23.1, 536/23.5, 536/24.31, 536/24.33, 435/320.1, 435/325, 435/348, 435/252.3
See application file for complete search history.

PRIOR-ART-DISCLOSED:

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3850752	November 1974	Schuurs et al.	435/7.93

3939350	February 1976	Kronick et al.	250/365
3996345	December 1976	Ullman et al.	436/537
4275149	June 1981	Litman et al.	435/7.91
4277437	July 1981	Maggio	422/61
4366241	December 1982	Tom et al.	435/7.91
4458066	July 1984	Caruthers et al.	536/25.34
5010175	April 1991	Rutter et al.	530/334
5194376	March 1993	Kang	435/69.1
5288514	February 1994	Ellman	435/4
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5525735	June 1996	Gallop et al.	548/533
5539083	July 1996	Cook et al.	530/333
5541061	July 1996	Fodor et al.	435/6
5549974	August 1996	Holmes	428/403
5559410	September 1996	Papazian et al.	318/445
5569588	October 1996	Ashby et al.	435/6
5576220	November 1996	Hudson et al.	436/518
5585639	December 1996	Dorsel et al.	250/458.1
5593853	January 1997	Chen et al.	435/29

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WO 93/20242	October 1993	WO	
WO 97/00271	January 1997	WO	

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ART-UNIT: 1655

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ATTY-AGENT-FIRM: Medlen & Carroll LLP

ABSTRACT:

This invention provides methods for the screening and identification of agents having potent effects on the progression of the cell cycle. In one embodiment, the methods involve contacting a polymerized microtubule with a microtubule severing protein or a microtubule depolymerizing protein in the presence of an ATP or a GTP and a test agent; and detecting the formation of tubulin monomers, dimers or oligomers. The p60 subunit of katanin provides a particularly preferred microtubule severing protein possessing both ATPase and microtubule severing activities.

6 Claims, 20 Drawing figures

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CROSS-REFERENCE TO RELATED APPLICATIONS This application claims benefit under 35 U.S.C. .sctn. 119(e) of provisional patent U.S. S No. 60/081,734, filed on Apr. 14, 1998, which is herein incorporated by reference in its entirety for all purposes.

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ART-UNIT: 1642

PRIMARY-EXAMINER: Caputa; Anthony C.

ASSISTANT-EXAMINER: Harris; Alana M.

ATTY-AGENT-FIRM: Medlen & Carroll, LLP

ABSTRACT:

This invention provides methods for the screening and identification of agents having potent effects on the progression of the cell cycle. In one embodiment, the methods involve contacting a polymerized microtubule with a microtubule severing protein or a microtubule depolymerizing protein in the presence of an ATP or a GTP and a test agent; and detecting the formation of tubulin monomers, dimers or oligomers. The p60 subunit of katanin provides a particularly preferred microtubule severing protein possessing both ATPase and microtubule severing activities.

4 Claims, 20 Drawing figures

☐ 11. Document ID: US 6351302 B1

L4: Entry 11 of 19 File: USPT Feb 26, 2002

US-PAT-NO: 6351302
DOCUMENT-IDENTIFIER: US 6351302 B1

TITLE: Analog sound track digitizer

DATE-ISSUED: February 26, 2002

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Carlsen, II; George D.	Cardiff	CA	92007	
Vale; Ronald W	San Diego	CA	92103	

APPL-NO: 09/569145 [PALM]
DATE FILED: May 11, 2000

INT-CL-ISSUED: [07] G03 B 31/02, G11 B 7/00

US-CL-ISSUED: 352/26; 352/37, 369/125
US-CL-CURRENT: 352/26; 352/37, 369/125

FIELD-OF-CLASSIFICATION-SEARCH: 352/6, 352/10, 352/26, 352/29, 352/1, 352/5, 352/11, 352/27, 352/37, 369/124, 369/125, 371/36, 371/37.9, 371/64
See application file for complete search history.

PRIOR-ART-DISCLOSED:

U.S. PATENT DOCUMENTS

PAT-NO	ISSUE-DATE	PATENTEE-NAME	US-CL

3915566	October 1975	Fisher	352/10
3964826	June 1976	Joseph et al.	352/10
4085296	April 1978	Keegan	179/100.3
4124784	November 1978	Johnson et al.	179/100.3
4355383	October 1982	Dolby	369/120
4577302	March 1986	Allen	369/46
4596008	June 1986	Beard	369/107
4599715	July 1986	Beard	369/124
4734903	March 1988	Shirai et al.	369/107
5231627	July 1993	Paul et al.	369/125
5237559	August 1993	Murphy et al.	369/125
5483306	January 1996	Rodriguez	354/10
5526075	June 1996	Carlsen	352/26
5543868	August 1996	Tachi	352/27
5621490	April 1997	Davis	352/79
5710752	January 1998	Seagrave et al.	369/97

ART-UNIT: 2851

PRIMARY-EXAMINER: Adams; Russell

ASSISTANT-EXAMINER: Fuller; Rodney

ATTY-AGENT-FIRM: Logan II; Charles C.

ABSTRACT:

The system eliminates the noise, rumble and hiss from any standard 35 mm analog optical sound track. By simply feeding the film through the projector sound head in a normal manner the system automatically converts the analog optical sound tracks to digital quality. No special storing of digital data on film is required and no special digital decoder equipment is needed. The system produces noise-free sound, increased frequency response, expanded dynamic range and clarity of the dialogue. Film studios will no longer need to carry a double inventory of films having digital and analog sound tracks or to process the sound tracks for noise reduction.

12 Claims, 9 Drawing figures

☐ 12. Document ID: US 6023015 A

L4: Entry 12 of 19 File: USPT Feb 8, 2000

US-PAT-NO: 6023015
DOCUMENT-IDENTIFIER: US 6023015 A

TITLE: Piano hammer shaping tool

DATE-ISSUED: February 8, 2000

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Vale; Raymond J.	San Antonio	TX	78240	

APPL-NO: 09/256024 [PALM]
DATE FILED: February 23, 1999

INT-CL-ISSUED: [06] G10 G 7/00

US-CL-ISSUED: 84/458; 84/453, 84/459, 451/59, 451/523, 451/539
US-CL-CURRENT: 84/458; 451/523, 451/539, 451/59, 84/453, 84/459

FIELD-OF-CLASSIFICATION-SEARCH: 84/458, 84/459, 84/460, 84/453, 84/254, 451/59, 451/523, 451/526, 451/538, 451/539
See application file for complete search history.

PRIOR-ART-DISCLOSED:

U.S. PATENT DOCUMENTS

PAT-NO	ISSUE-DATE	PATENTEE-NAME	US-CL
696025	March 1902	Finney	84/460
1165452	December 1915	Rudolph	451/495
1344318	June 1920	Slye et al.	239/57
1570177	January 1926	Pointer	451/495
4206574	June 1980	Dotsko	
4563152	January 1986	McClure	433/39
4823515	April 1989	Blome	
5140784	August 1992	Walsh	
5148639	September 1992	Sakai et al.	451/59

ART-UNIT: 287

PRIMARY-EXAMINER: Nappi; Robert E.

ASSISTANT-EXAMINER: Hsieh; Shih-yung

ATTY-AGENT-FIRM: Jackson Walker LLP

ABSTRACT:

A hammer shaping tool is designed with two parts: a piano hammer template and a sanding strip. The template's face surface is a mirror of an desirably shaped piano hammer with side walls forming a channel along the face surface of the template. The width of the face surface, and consequently the channel, is generally the same as the width of the striking edge of the hammers. The sanding strip likewise has the same width as the striking edge of the hammers. The sanding strip is placed, cutting side against the hammer, on the striking edge of the hammer. The template is then placed against the low friction side of the sanding strip and a portion of

the hammer. The sanding strip is pulled through the template channel, the low friction side of the sanding strip sliding against the face surface of the template, and the cutting surface of the sanding strip engaging the surface face of the piano hammer, cutting the hammer facing surface to the desired shape. The strip and guide can then be placed on another portion of the hammer and the process repeated, eventually shaping the entire hammer. The amount of pressure exerted on the tool against the hammer shoulders in conjunction with the sandpaper grit size dictates the amount of felt removed from the hammer.

4 Claims, 4 Drawing figures

☐ 13. Document ID: US 5025473 A

L4: Entry 13 of 19 File: USPT Jun 18, 1991

US-PAT-NO: 5025473
DOCUMENT-IDENTIFIER: US 5025473 A

TITLE: Hemispherical speaker system

DATE-ISSUED: June 18, 1991

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Carlsen, II; George D.	Cardiff	CA	92007	
Vale; Ronald W.	San Ysidro	CA	92073	

APPL-NO: 07/399236 [PALM]
DATE FILED: August 24, 1989

INT-CL-ISSUED: [05] H04 R 1/02, H04 R 25/00, H05 K 5/00

US-CL-ISSUED: 381/88; 381/89, 381/90, 381/205, 181/148
US-CL-CURRENT: 381/387; 181/148, 381/336, 381/386, 381/89

FIELD-OF-CLASSIFICATION-SEARCH: 381/88, 381/89, 381/90, 381/186, 381/188, 381/205, 181/144, 181/148, 181/153
See application file for complete search history.

PRIOR-ART-DISCLOSED:

U.S. PATENT DOCUMENTS

PAT-NO	ISSUE-DATE	PATENTEE-NAME	US-CL
4179585	December 1979	Herrenschmidt	381/90
4231446	November 1980	Weiss et al.	181/148
4673057	June 1987	Glassco	181/144
4837826	June 1989	Schupbach	381/90

FOREIGN PATENT DOCUMENTS

FOREIGN-PAT-NO	PUBN-DATE	COUNTRY	CLASS
0224998	December 1984	JP	381/186

ART-UNIT: 261

PRIMARY-EXAMINER: Ng; Jin F.

ASSISTANT-EXAMINER: Chan; Jason

ATTY-AGENT-FIRM: Logan, II; Charles C.

ABSTRACT:

An arrangement of divergently mounted acoustic transducers in a hemispherical air tight enclosure, the enclosure being sized with regard to the loading requirements of the acoustic transducers to produce a small size speaker system having an omnidirectional sound radiation pattern and a flat frequency response without the need of a crossover network. The hemispherical enclosure being comprised of six flat equal sided pentagonal plates, five triangular shaped flat gussets and a flat base plate all of which when assembled forms a half dodecahedron polyhedron shaped enclosure with a closed base, with the base serving as the enclosure mounting surface.

4 Claims, 1 Drawing figures

☐ 14. Document ID: US 3853034 A

L4: Entry 14 of 19 File: USPT Dec 10, 1974

US-PAT-NO: 3853034
DOCUMENT-IDENTIFIER: US 3853034 A

TITLE: BRASS MUSICAL INSTRUMENT PRACTICE DEVICE

DATE-ISSUED: December 10, 1974

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Vale; Raymond J.	San Antonio	TX	78240	

APPL-NO: 05/418780 [PALM]
DATE FILED: November 23, 1973

INT-CL-ISSUED: [] G09 b 15/06

US-CL-ISSUED: 84/465

US-CL-CURRENT: 84/465

FIELD-OF-CLASSIFICATION-SEARCH: 84/465, 84/400, 84/401, 84/387, 84/388, 84/330
See application file for complete search history.

PRIOR-ART-DISCLOSED:

U.S. PATENT DOCUMENTS

PAT-NO	ISSUE-DATE	PATENTEE-NAME	US-CL
1435173	November 1922	Pappalardi	84/400
1467422	September 1923	D'Alfonso	84/400
3392619	July 1968	Hill	84/400

ART-UNIT: 214

PRIMARY-EXAMINER: Wilkinson; Richard B.

ASSISTANT-EXAMINER: Gonzales; John F.

ABSTRACT:

A brass instrument practice device in which a tubing of the device can be pulled outwardly so to extend and increase the tubular length, thereby increasing the interior air column and volume, and whereby extending the tubing, adding additional slides or changing the slides with longer sliding tubes, these tubular adjustments coupled with adjustable resistance pressure valve can simulate any tubular response.

3 Claims, 4 Drawing figures

☐ 15. Document ID: US 3659489 A

L4: Entry 15 of 19 File: USPT May 2, 1972

US-PAT-NO: 3659489
DOCUMENT-IDENTIFIER: US 3659489 A

TITLE: BRASS-INSTRUMENT-PRACTICE DEVICE

DATE-ISSUED: May 2, 1972

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Vale; Raymond J.	San Antonio	TX	78240	

APPL-NO: 05/071157 [PALM]

DATE FILED: September 10, 1970

INT-CL-ISSUED: [] G09 b 15/06

US-CL-ISSUED: 84/465; 84/453
US-CL-CURRENT: 84/465; 84/453, 984/135, 984/DIG.1

FIELD-OF-CLASSIFICATION-SEARCH: 84/330, 84/383, 84/387, 84/398, 84/399, 84/400, 84/453, 84/465, 131/230, 46/178
See application file for complete search history.

PRIOR-ART-DISCLOSED:

U.S. PATENT DOCUMENTS

PAT-NO	ISSUE-DATE	PATENTEE-NAME	US-CL
352814	November 1886	Foss	131/230 X
1763336	June 1930	Wilder	84/387
2515411	July 1950	La Velle	84/398

ART-UNIT: 282

PRIMARY-EXAMINER: Wilkinson; Richard B.

ASSISTANT-EXAMINER: Gonzales; John F.

ABSTRACT:

A resonator chamber attachable to a brass instrument mouthpiece so as to buffer the buzzing sound produced by the brass instrument mouthpiece, the device comprising a barrel which is a singular part of generally bowl-shape with a central chamber that opens out upon one end of the barrel, the inner end of the chamber communicating with the terminal end of the brass instrument mouthpiece.

1 Claims, 3 Drawing figures

☐ 16. Document ID: US 2368952 A

L4: Entry 16 of 19 File: USPT Feb 6, 1945

US-PAT-NO: 2368952
DOCUMENT-IDENTIFIER: US 2368952 A

TITLE: Collapsible tube and supporting bracket therefor [TEXT AVAILABLE IN USOCR DATABASE]

DATE-ISSUED: February 6, 1945

INVENTOR-INFORMATION:
NAME CITY STATE ZIP CODE COUNTRY
VALE RUBY R

US-CL-CURRENT: 222/100

☐ 17. Document ID: US 1419329 A

L4: Entry 17 of 19 File: USPT Jun 13, 1922

US-PAT-NO: 1419329
DOCUMENT-IDENTIFIER: US 1419329 A

TITLE: Vehicle wheel [TEXT AVAILABLE IN USOCR DATABASE]

DATE-ISSUED: June 13, 1922

INVENTOR-INFORMATION:
NAME CITY STATE ZIP CODE COUNTRY
VALE RUBY R

US-CL-CURRENT: 152/375; 152/159, 301/40.3

☐ 18. Document ID: US 1382031 A

L4: Entry 18 of 19 File: USPT Jun 21, 1921

US-PAT-NO: 1382031
DOCUMENT-IDENTIFIER: US 1382031 A

TITLE: Automobile-wheel [TEXT AVAILABLE IN USOCR DATABASE]

DATE-ISSUED: June 21, 1921

INVENTOR-INFORMATION:
NAME CITY STATE ZIP CODE COUNTRY
VALE RUBY R

US-CL-CURRENT: 301/64.303

☐ 19. Document ID: US 1335469 A

L4: Entry 19 of 19 File: USPT Mar 30, 1920

US-PAT-NO: 1335469
DOCUMENT-IDENTIFIER: US 1335469 A

TITLE: Pneumatic vehicle-tire [TEXT AVAILABLE IN USOCR DATABASE]

DATE-ISSUED: March 30, 1920

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
VALE RUBY R				

US-CL-CURRENT: 152/166; 152/160, 152/209.1, 152/396, 152/399, 152/454, 152/511, 152/523, 152/902, 301/40.3

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 NEWS  8  MAY 30   IPC 8 Rolled-up Core codes added to CA/CAplus and
                   USPATFULL/USPAT2
 NEWS  9  MAY 30   The F-Term thesaurus is now available in CA/CAplus
 NEWS 10  JUN 02   The first reclassification of IPC codes now complete in
                   INPADOC
 NEWS 11  JUN 26   TULSA/TULSA2 reloaded and enhanced with new search and
                   and display fields
 NEWS 12  JUN 28   Price changes in full-text patent databases EPFULL and PCTFULL
 NEWS 13  JUl 11   CHEMSAFE reloaded and enhanced
 NEWS 14  JUl 14   FSTA enhanced with Japanese patents
 NEWS 15  JUl 19   Coverage of Research Disclosure reinstated in DWPI
 NEWS 16  AUG 09   INSPEC enhanced with 1898-1968 archive

 NEWS EXPRESS  JUNE 30 CURRENT WINDOWS VERSION IS V8.01b, CURRENT
               MACINTOSH VERSION IS V6.0c(ENG) AND V6.0Jc(JP),
               AND CURRENT DISCOVER FILE IS DATED 26 JUNE 2006.

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=> ATPases and review
L1 2002 ATPASES AND REVIEW

=> sequence and (types or kinds or family or families) and l1
L2 95 SEQUENCE AND (TYPES OR KINDS OR FAMILY OR FAMILIES) AND L1

=> d scan l2 1-5
DISPLAY FORMATS NOT ALLOWED WITH SCAN IN A MULTIFILE ENVIRONMENT

=> dup rem l2
PROCESSING COMPLETED FOR L2
L3 78 DUP REM L2 (17 DUPLICATES REMOVED)

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TI Comparative genomics of the FtsK-HerA superfamily of pumping ATPases: Implications for the origins of chromosome segregation, cell division and viral capsid packaging.

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TI How do P-type ATPases transport ions?

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TI Conserved arginine residues implicated in ATP hydrolysis, nucleotide-sensing, and inter-subunit interactions in AAA and AAA+ ATPases.

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TI ISWI complexes in Saccharomyces cerevisiae.

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TI Molecular perspectives on p97-VCP: Progress in understanding its structure and diverse biological functions.

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TI Functional expression of heterologous proteins in yeast: Insights into Ca(2+) signaling and Ca(2+)-transporting ATPases.

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TI Type II protein secretion and its relationship to bacterial type IV pili and archaeal flagella

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TI Investigating protein-protein interfaces in bacterial transcription complexes: A fragmentation approach.

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TI Regulation of plasma membrane H+-ATPase activity by the membrane environment.

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TI Streptomyces coelicolor A3(2) plasmid SCP2*: Deductions from the complete sequence.

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TI Subunit composition, structure, and distribution of bacterial V-type ATPases

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TI Efflux-mediated heavy metal resistance in prokaryotes.

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TI CFTR and MDR: ABC transporters with homologous structure but divergent function

L3 ANSWER 24 OF 78 MEDLINE on STN
TI NSF and p97/VCP: similar at first, different at last.

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TI Structural maintenance of chromosomes (SMC) proteins, a family of conserved ATPases.

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TI Molecular physiology of the SERCA and SPCA pumps.

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TI Structure of the fourth metal-binding domain from the Menkes copper-transporting ATPase

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TI Na(+)-driven flagellar motor of Vibrio.

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TI Role of alternative splicing in generating isoform diversity among plasma membrane calcium pumps

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TI Cholesterol modification of proteins.

L3 ANSWER 38 OF 78 MEDLINE on STN DUPLICATE 7
TI Emerging mechanisms for heavy metal transport in plants.

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TI H+-PPases: A tightly membrane-bound family.

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TI ABC-ATPases, adaptable energy generators fuelling transmembrane movement of a variety of molecules in organisms from bacteria to humans.

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TI Intracellular pathways of copper trafficking in yeast and humans

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TI H+-proton-pumping inorganic pyrophosphatase: A tightly membrane-bound family.

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TI The structure of the vacuolar ATPase in Neurospora crassa.

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TI The nongastric H+ -K+ -ATPases: Molecular and functional properties.

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TI Molecular biology of cation transport in plants

=> t ti l3 51-78

L3 ANSWER 51 OF 78 CAPLUS COPYRIGHT 2006 ACS on STN
TI The Ca2+ pumps and the Na+/Ca2+ exchangers

L3 ANSWER 52 OF 78 CAPLUS COPYRIGHT 2006 ACS on STN DUPLICATE 9
TI Inferences about the catalytic domain of P-type ATPases from the tertiary structures of enzymes that catalyze the same elementary reaction

L3 ANSWER 53 OF 78 MEDLINE on STN DUPLICATE 10
TI The AAA team: related ATPases with diverse functions.

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TI Sequence analysis of the AAA protein family

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TI Protein Motifs 2. The actin fold

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TI How much AAA does a cell need?

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TI Genetic interactions between the yeast RNA helicase homolog Prp16 and spliceosomal snRNAs identify candidate ligands for the Prp16 RNA-dependent ATPase.

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TI Wilson disease and Menkes disease: new handles on heavy-metal transport

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TI ABC transporters: bacterial exporters.

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TI ORGANELLAR PROTON ATPASES.

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TI STRUCTURAL CONSERVATION AND FUNCTIONAL DIVERSITY OF V ATPASES.

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TI ATP synthase: structure-function relationships.

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TI EVOLUTION OF ORGANELLAR PROTON ATPASES.

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TI Recent molecular approaches to the physiology of the plasma membrane proton pump

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TI Structure and properties of proton ATPase in intracellular acidic organelles

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TI Defining domains in type-I restriction and modification enzymes

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L3 ANSWER 70 OF 78 BIOSIS COPYRIGHT (c) 2006 The Thomson Corporation on STN
ACCESSION NUMBER: 1992:522535 BIOSIS
DOCUMENT NUMBER: PREV199294130610; BA94:130610
TITLE: EVOLUTION OF STRUCTURE AND FUNCTION OF V ATPASES.
AUTHOR(S): KIBAK H [Reprint author]; TAIZ L; STARKE T; BERNASCONI P; GOGARTEN J P
CORPORATE SOURCE: DEP MOL CELL BIOL, UNIV CONN, STORRS, CONN 06269, USA
SOURCE: Journal of Bioenergetics and Biomembranes, (1992) Vol. 24, No. 4, pp. 415-424.
CODEN: JBBID4. ISSN: 0145-479X.
DOCUMENT TYPE: Article
FILE SEGMENT: BA
LANGUAGE: ENGLISH
ENTRY DATE: Entered STN: 19 Nov 1992
Last Updated on STN: 20 Nov 1992
AB Proton pumping ATPases/ATPsynthases are found in all groups of present-day organisms. The structure of V- and F-type ATPases /ATP synthases is very consreved throughout evolution. Sequence analysis shows that the V- and F-type ATPases evolved from the same enzyme already present in the last common ancestor of all known extant life forms. The catalytic and noncatalytic subunits found in the dissociable head groups of the V/F-type ATPases are paralogous subunits, i.e., these two types of subunits evolved from a common ancestral gene. The gene duplication giving rise to these two genes (i.e., encoding the catalytic and noncatalytic subunits) predates the time of the last common ancestor. Mapping of gene duplication events that occurred in the evolution of the proteolipid, the noncatalytic and the catalytic subunits, onto the tree of life leads to a prediction for the likely subunit structure of the encoded ATPases. A correlation between structure from this correlation of the bioenergetics operative in proto-eukaryotes and in the last common ancestor are

presented. The similarities of the V/F-ATPase subunits to an V/F-ATPase-like protein that was implicated to play a role in flagellar assembly are evaluated. Different V-ATPase isoforms have been detected in some higher eukaryotes. These data are analyzed with respect to the possible function of the different isoforms (tissue specific, organelle specific) and with respect to the point in their evolution when these gene duplications giving rise to the isoforms had occurred, i.e., how far these isoforms are distributed.

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ACCESSION NUMBER: 1992:528630 BIOSIS
DOCUMENT NUMBER: PREV199294136705; BA94:136705
TITLE: STRUCTURAL CONSERVATION AND FUNCTIONAL DIVERSITY OF V ATPASES.
AUTHOR(S): NELSON N [Reprint author]
CORPORATE SOURCE: ROCHE INST MOL BIOL, ROCHE RES CENT, NUTLEY, NJ 07110, USA
SOURCE: Journal of Bioenergetics and Biomembranes, (1992) Vol. 24, No. 4, pp. 407-414.
CODEN: JBBID4. ISSN: 0145-479X.
DOCUMENT TYPE: Article
FILE SEGMENT: BA
LANGUAGE: ENGLISH
ENTRY DATE: Entered STN: 19 Nov 1992
Last Updated on STN: 20 Nov 1992

AB The vacuolar system of eukaryotic cells contains a large number of organelles that are primary energized by an H+-ATPase that was named V-ATPase. The structure and function of V-ATPases from various sources was extensively studied in the last few years. Several genes encoding subunits of the enzyme were cloned and sequenced. The sequence information revealed the relations between V-ATPases and F-ATPases that evolved from common ancestral genes. The two families of proton pumps share structural and functional similarity. They contain distinct peripheral catalytic sectors and hydrophobic membrane sectors. Genes encoding subunits of V-ATPase in yeast cells were interrupted to yield mutants that are devoid of the enzyme and are sensitive to pH and calcium concentrations in the medium. The mutants were used to study structure, function, molecular biology, and biogenesis of the V-ATPase. They also shed light on the functional assembly of the enzyme in the vacuolar system.

L3 ANSWER 72 OF 78 MEDLINE on STN

ACCESSION NUMBER: 92338207 MEDLINE
DOCUMENT NUMBER: PubMed ID: 1385978
TITLE: ATP synthase: structure-function relationships.
AUTHOR: Thomas P J; Bianchet M; Garboczi D N; Hullihen J; Amzel M; Pedersen P L
CORPORATE SOURCE: Department of Biological Chemistry, Johns Hopkins University, School of Medicine, Baltimore, MD.
CONTRACT NUMBER: CA 10951 (NCI)
GM 25432 (NIGMS)
SOURCE: Biochimica et biophysica acta, (1992 Jul 17) Vol. 1101, No. 2, pp. 228-31. Ref: 23
Journal code: 0217513. ISSN: 0006-3002.
PUB. COUNTRY: Netherlands
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
General Review; (REVIEW)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 199208
ENTRY DATE: Entered STN: 11 Sep 1992
Last Updated on STN: 11 Sep 1992
Entered Medline: 25 Aug 1992

AB Recent work has focused on obtaining a better understanding of the three-dimensional structural relationships between the alpha and beta subunits of the F1 moiety and the location of nucleotide binding domains within these subunits. Four types of approach are currently being pursued: X-ray crystallographic, chemical, molecular biological and biochemical. Here we briefly review some of the major conclusions of these studies, and point out some of the problems that must be resolved before an adequate model that relates structure to function in the ATP synthase molecule can be formulated.

=> d ibib abs l3 59

L3 ANSWER 59 OF 78 CAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 1995:756523 CAPLUS
DOCUMENT NUMBER: 123:136585
TITLE: A 200-amino acid ATPase module in search of a basic function
AUTHOR(S): Confalonieri, Fabrice; Duguet, Michel
CORPORATE SOURCE: Institut de Genetique et Microbiologie, Universite Paris Sud, Orsay, 91405, Fr.
SOURCE: BioEssays (1995), 17(7), 639-50
CODEN: BIOEEJ; ISSN: 0265-9247
PUBLISHER: Company of Biologists
DOCUMENT TYPE: Journal; General Review
LANGUAGE: English
AB A review, with 78 refs. A fast growing family of ATPases has recently been highlighted. It was named the AAA family, for ATPases Associated to a variety of cellular Activities. The key feature of the family is a highly conserved module of 230 amino acids present in one or two copies in each protein. Despite extensive sequence conservation, the members of the family fulfill a large diversity of cellular functions: cell cycle regulation, gene expression in yeast and HIV, vesicle-mediated transport, peroxisome assembly, 26S protease function etc. In addition, several members of this family can be found in the same organism (up to 17 in S. cerevisiae). The contrast between functional diversity and structural conservation of the module, from archaebacteria to mammals, suggests that it plays an essential, but as yet unknown, role at key points of the cellular machinery. Two (non-exclusive) such possibilities are: (1) ATP-dependent proteasome function and (2) ATP-dependent anchorage of proteins. Finally, the basic biochem. activity of the AAA module is still a matter of speculation, and the authors propose that it acts as an ATP-dependent protein clamp.

=> ATPases and review and microtubule
L4 18 ATPASES AND REVIEW AND MICROTUBULE

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TI Plasmid segregation mechanisms.

L5 ANSWER 2 OF 17 CAPLUS COPYRIGHT 2006 ACS on STN
TI Dynein: an ancient motor protein involved in multiple modes of transport

L5 ANSWER 3 OF 17 CAPLUS COPYRIGHT 2006 ACS on STN

TI Design and regulation of the AAA+ microtubule motor dynein

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TI RecA-like motor ATPases - Lessons from structures.

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TI The kin I kinesins are microtubule end-stimulated ATPases

L5 ANSWER 6 OF 17 CAPLUS COPYRIGHT 2006 ACS on STN
TI AAA domains and organization of the dynein motor unit

L5 ANSWER 7 OF 17 CAPLUS COPYRIGHT 2006 ACS on STN
TI Functions of mechanoenzymes in cells of Saccharomyces cerevisiae

L5 ANSWER 8 OF 17 CAPLUS COPYRIGHT 2006 ACS on STN
TI The role of dynein in microtubule-based motility

L5 ANSWER 9 OF 17 CAPLUS COPYRIGHT 2006 ACS on STN
TI Electrodynamics of microtubular motors: The building blocks of a new model

L5 ANSWER 10 OF 17 CAPLUS COPYRIGHT 2006 ACS on STN
TI Role of microtubules in water channel delivery in vasopressin-sensitive epithelia

L5 ANSWER 11 OF 17 CAPLUS COPYRIGHT 2006 ACS on STN
TI Motor proteins for cytoplasmic microtubules

L5 ANSWER 12 OF 17 CAPLUS COPYRIGHT 2006 ACS on STN
TI Kinesin and myosin ATPases: variations on a theme

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TI Mechanochemical coupling in cilia.

L5 ANSWER 14 OF 17 BIOSIS COPYRIGHT (c) 2006 The Thomson Corporation on STN
TI THE ROLE OF DYNEIN AND OTHER MICROTUBULE-ACTIVATED ATPASES IN MITOSIS.

L5 ANSWER 15 OF 17 CAPLUS COPYRIGHT 2006 ACS on STN
TI Enzymes for microtubule-dependent motility

L5 ANSWER 16 OF 17 CAPLUS COPYRIGHT 2006 ACS on STN
TI The role of dynein and other microtubule-activated ATPases in mitosis

L5 ANSWER 17 OF 17 BIOSIS COPYRIGHT (c) 2006 The Thomson Corporation on STN DUPLICATE 1
TI DYNEIN ATPASES AS MICROTUBULE MOTORS.

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=> d ibib abs l5 12, 15, 16

L5 ANSWER 12 OF 17 CAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 1992:465195 CAPLUS

DOCUMENT NUMBER: 117:65195
TITLE: Kinesin and myosin ATPases: variations on a theme
AUTHOR(S): Hackney, David D.
CORPORATE SOURCE: Dep. Biol. Sci., Carnegie Mellon Univ., Pittsburgh, PA, 15213, USA
SOURCE: Philosophical Transactions of the Royal Society of London, Series B: Biological Sciences (1992), 336(1276), 13-18
CODEN: PTRBAE; ISSN: 0080-4622
DOCUMENT TYPE: Journal; General Review
LANGUAGE: English

AB A review with 23 refs. The enzymes kinesin and myosin are examples of mol. motors which couple ATP hydrolysis to directed movement of biol. structures. Myosin has been extensively studied, and its structure and mechanism of coupling are known in detail. Much less is known about kinesin, but many of its major properties are similar to those of myosin. Both enzymes have 2 catalytic head groups at the end of a long α-helical rod. The head groups contain the sites for ATP hydrolysis and interaction with their resp. partners for movement (microtubules or F-actin). In each case the binding and hydrolysis of ATP is rapid and the steady state ATPase rate is limited by a slow step in the region of product release. This slow release of product is accelerated by interaction with actin or microtubules coupled to changes in binding affinity. As there is no evidence for a close evolutionary link between kinesin and myosin, these and other similarities may represent convergence to set of common functional properties which are constrained by the requirements of protein structure and the use of ATP hydrolysis as a source of energy. It will be of particular interest to determine if these common properties are also shared by the large number of divergent proteins which have recently been discovered to possess a domain which is homologous to the head group of kinesin.

L5 ANSWER 15 OF 17 CAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 1989:208181 CAPLUS
DOCUMENT NUMBER: 110:208181
TITLE: Enzymes for microtubule-dependent motility
AUTHOR(S): McIntosh, J. Richard; Porter, Mary E.
CORPORATE SOURCE: Dep. Mol. Cell. Dev. Biol., Univ. Colorado, Boulder, CO, 80309, USA
SOURCE: Journal of Biological Chemistry (1989), 264(11), 6001-4
CODEN: JBCHA3; ISSN: 0021-9258
DOCUMENT TYPE: Journal; General Review
LANGUAGE: English

AB A review and discussion with 58 refs., of recent studies of dynein and kinesin ATPases and the roles those enzymes may play in cell motility.

L5 ANSWER 16 OF 17 CAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 1989:627624 CAPLUS
DOCUMENT NUMBER: 111:227624
TITLE: The role of dynein and other microtubule -activated ATPases in mitosis
AUTHOR(S): Vallee, Richard B.; Shpetner, Howard S.; Paschal, Bryce M.
CORPORATE SOURCE: Cell Biol. Group, Worcester Found. Exp. Biol., Shrewsbury, MA, 01545, USA
SOURCE: Progress in Clinical and Biological Research (1989), 318(Mech. Chromosome Distrib. Aneuploidy), 205-15
CODEN: PCBRD2; ISSN: 0361-7742
DOCUMENT TYPE: Journal; General Review
LANGUAGE: English

AB A review, with 20 refs., on the identification and characterization of cytoplasmic dynein and a 100-kDa ATPase which may be involved in microtubule-microtubule interaction. The function of these 2 proteins in mitosis are discussed.

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FULL ESTIMATED COST	0.12	65.34

DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)	SINCE FILE ENTRY	TOTAL SESSION
CA SUBSCRIBER PRICE	0.00	-3.00

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=>
=> t ti l5 1-17

L5 ANSWER 1 OF 17 EMBASE COPYRIGHT (c) 2006 Elsevier B.V. All rights reserved on STN
TI Plasmid segregation mechanisms.

L5 ANSWER 2 OF 17 CAPLUS COPYRIGHT 2006 ACS on STN
TI Dynein: an ancient motor protein involved in multiple modes of transport

L5 ANSWER 3 OF 17 CAPLUS COPYRIGHT 2006 ACS on STN
TI Design and regulation of the AAA+ microtubule motor dynein

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TI RecA-like motor ATPases - Lessons from structures.

L5 ANSWER 5 OF 17 CAPLUS COPYRIGHT 2006 ACS on STN
TI The kin I kinesins are microtubule end-stimulated ATPases

L5 ANSWER 6 OF 17 CAPLUS COPYRIGHT 2006 ACS on STN
TI AAA domains and organization of the dynein motor unit

L5 ANSWER 7 OF 17 CAPLUS COPYRIGHT 2006 ACS on STN
TI Functions of mechanoenzymes in cells of Saccharomyces cerevisiae

L5 ANSWER 8 OF 17 CAPLUS COPYRIGHT 2006 ACS on STN
TI The role of dynein in microtubule-based motility

L5 ANSWER 9 OF 17 CAPLUS COPYRIGHT 2006 ACS on STN
TI Electrodynamics of microtubular motors: The building blocks of a new model

L5 ANSWER 10 OF 17 CAPLUS COPYRIGHT 2006 ACS on STN
TI Role of microtubules in water channel delivery in vasopressin-sensitive epithelia

L5 ANSWER 11 OF 17 CAPLUS COPYRIGHT 2006 ACS on STN
TI Motor proteins for cytoplasmic microtubules

L5 ANSWER 12 OF 17 CAPLUS COPYRIGHT 2006 ACS on STN
TI Kinesin and myosin ATPases: variations on a theme

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TI Mechanochemical coupling in cilia.

L5 ANSWER 14 OF 17 BIOSIS COPYRIGHT (c) 2006 The Thomson Corporation on STN
TI THE ROLE OF DYNEIN AND OTHER MICROTUBULE-ACTIVATED ATPASES IN MITOSIS.

L5 ANSWER 15 OF 17 CAPLUS COPYRIGHT 2006 ACS on STN
TI Enzymes for microtubule-dependent motility

L5 ANSWER 16 OF 17 CAPLUS COPYRIGHT 2006 ACS on STN
TI The role of dynein and other microtubule-activated ATPases in mitosis

L5 ANSWER 17 OF 17 BIOSIS COPYRIGHT (c) 2006 The Thomson Corporation on STN DUPLICATE 1
TI DYNEIN ATPASES AS MICROTUBULE MOTORS.

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FULL ESTIMATED COST	33.58	98.92

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CA SUBSCRIBER PRICE	0.00	-3.00

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COST IN U.S. DOLLARS	SINCE FILE ENTRY	TOTAL SESSION
FULL ESTIMATED COST	0.54	99.46

DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)	SINCE FILE ENTRY	TOTAL SESSION
CA SUBSCRIBER PRICE	0.00	-3.00

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=> d ibib abs l5 1-6

L5 ANSWER 1 OF 17 EMBASE COPYRIGHT (c) 2006 Elsevier B.V. All rights reserved on STN

ACCESSION NUMBER: 2006003444 EMBASE
TITLE: Plasmid segregation mechanisms.
AUTHOR: Ebersbach G.; Gerdes K.
CORPORATE SOURCE: G. Ebersbach, Department of Biochemistry and Molecular Biology, University of Southern Denmark, DK-5230 Odense M, Denmark
SOURCE: Annual Review of Genetics, (2005) Vol. 39, pp. 453-479. .
Refs: 150
ISSN: 0066-4197 CODEN: ARVGB7
COUNTRY: United States
DOCUMENT TYPE: Journal; General Review
FILE SEGMENT: 004 Microbiology
LANGUAGE: English
SUMMARY LANGUAGE: English
ENTRY DATE: Entered STN: 2 Feb 2006
Last Updated on STN: 2 Feb 2006

AB Bacterial plasmids encode partitioning (par) loci that ensure ordered plasmid segregation prior to cell division. par loci come in two types: those that encode actin-like ATPases and those that encode deviant Walker-type ATPases. ParM, the actin-like ATPase of plasmid R1, forms dynamic filaments that segregate plasmids paired at mid-cell to daughter cells. Like microtubules, ParM filaments exhibit dynamic instability (i.e., catastrophic decay) whose regulation is an important component of the DNA segregation process. The Walker box ParA ATPases are related to MinD and form highly dynamic, oscillating filaments that are required for the subcellular movement and positioning of plasmids. The role of the observed ATPase oscillation is not yet understood. However, we propose a simple model that couples plasmid segregation to ParA oscillation. The model is consistent with the observed movement and localization patterns of plasmid foci and does not require the involvement of plasmid-specific host-encoded factors.

L5 ANSWER 2 OF 17 CAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2004:210638 CAPLUS
DOCUMENT NUMBER: 140:231019
TITLE: Dynein: an ancient motor protein involved in multiple modes of transport
AUTHOR(S): Vallee, Richard B.; Williams, John C.; Varma, Dileep; Barnhart, Lora E.
CORPORATE SOURCE: Departments of Pathology and Anatomy and Cell Biology, College of Physicians and Surgeons, Columbia University, New York, NY, 10032, USA
SOURCE: Journal of Neurobiology (2004), 58(2), 189-200
CODEN: JNEUBZ; ISSN: 0022-3034
PUBLISHER: John Wiley & Sons, Inc.
DOCUMENT TYPE: Journal; General Review
LANGUAGE: English
AB A review. The dyneins represent 1 of 2 families of known microtubule motor proteins, and produce force toward the minus ends of microtubules. All forms of dynein contain as their largest subunit a heavy chain (HC) polypeptide of >500 kDa mol. weight, which is responsible for the ATPase and motor activities. The dynein motor domain represents a substantial portion of the HC, the C-terminal 350 kDa, and its large size results from the multiplicity of ATPase units and other structures it contains. It appears to have had its evolutionary origin in the AAA family of ATPases. The arrangement pattern of ATPase units is absolutely conserved in all dynein HCs from algae to vertebrates, and from axonemal to cytoplasmic forms of dynein, and suggests that the dyneins diverged from the rest of the AAA family very long ago. Cytoplasmic dynein has long been thought to be responsible for retrograde axonal transport. As the number of cellular roles for this multifunctional protein has expanded, the complexity of its contribution to axonal transport has increased. Here, the increasing evidence for a role for cytoplasmic dynein in anterograde as well as retrograde transport is discussed. The current status of the complex dynein cargo-binding mechanism is evaluated. Finally, recent genetic evidence supporting a role in axonal transport and revealing a role in neurodegenerative conditions is reviewed.
REFERENCE COUNT: 98 THERE ARE 98 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L5 ANSWER 3 OF 17 CAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2004:240547 CAPLUS
DOCUMENT NUMBER: 142:70600
TITLE: Design and regulation of the AAA+ microtubule motor dynein
AUTHOR(S): Sakato, Miho; King, Stephen M.
CORPORATE SOURCE: Department of Biochemistry, University of Connecticut Health Center, Farmington, CT, 06030-3305, USA
SOURCE: Journal of Structural Biology (2004), 146(1/2), 58-71
CODEN: JSBIEM; ISSN: 1047-8477
PUBLISHER: Elsevier Science
DOCUMENT TYPE: Journal; General Review
LANGUAGE: English
AB A review. Dyneins are highly complex mol. motors that transport their attached cargo towards the minus end of microtubules. These enzymes are required for many essential motile activities within the cytoplasm and also power eukaryotic cilia and flagella. Each dynein contains one or more heavy chain motor units that consist of an N-terminal stem domain that is involved in cargo attachment, and six AAA+ domains (AAA1-6) plus a C-terminal globular segment that are arranged in a heptameric ring. At least one AAA+ domain (AAA1) is capable of ATP binding and hydrolysis, and the available data suggest that one or more addnl. domains also may bind

nucleotide. The ATP-sensitive microtubule binding site is located at the tip of a 10 nm coiled coil stalk that emanates from between AAA4 and AAA5. The function of this motor both in the cytoplasm and the flagellum must be tightly regulated in order to result in useful work. Consequently, dyneins also contain a series of addnl. components that serve to define the cargo-binding properties of the enzyme and which act as sensors to transmit regulatory inputs to the motor units. Here we describe the two basic dynein designs and detail the various regulatory systems that impinge on this motor within the eukaryotic flagellum.
REFERENCE COUNT: 148 THERE ARE 148 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L5 ANSWER 4 OF 17 EMBASE COPYRIGHT (c) 2006 Elsevier B.V. All rights reserved on STN
ACCESSION NUMBER: 2004458368 EMBASE
TITLE: RecA-like motor ATPases - Lessons from structures.
AUTHOR: Ye J.; Osborne A.R.; Groll M.; Rapoport T.A.
CORPORATE SOURCE: T.A. Rapoport, Department of Cell Biology, Harvard Medical School, HHMI, 240 Longwood Ave., L., Boston, MA, United States. tom_rapoport@hms.harvard.edu
SOURCE: Biochimica et Biophysica Acta - Bioenergetics, (4 Nov 2004) Vol. 1659, No. 1, pp. 1-18. .
Refs: 103
ISSN: 0005-2728 CODEN: BBBEB4
PUBLISHER IDENT.: S 0005-2728(04)00167-7
COUNTRY: Netherlands
DOCUMENT TYPE: Journal; General Review
FILE SEGMENT: 004 Microbiology
LANGUAGE: English
SUMMARY LANGUAGE: English
ENTRY DATE: Entered STN: 19 Nov 2004
Last Updated on STN: 19 Nov 2004
AB A large class of ATPases contains a RecA-like structural domain and uses the energy of nucleotide binding and hydrolysis to perform mechanical work, for example, to move polypeptides or nucleic acids. These ATPases include helicases, ABC transporters, clamp loaders, and proteases. The functional units of the ATPases contain different numbers of RecA-like domains, but the nucleotide is always bound at the interface between two adjacent RecA-like folds and the two domains move relative to one another during the ATPase cycle. The structures determined for different RecA-like motor ATPases begin to reveal how they move macromolecules. .COPYRGT. 2004 Elsevier B.V. All rights reserved.

L5 ANSWER 5 OF 17 CAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2003:221304 CAPLUS
DOCUMENT NUMBER: 139:145572
TITLE: The kin I kinesins are microtubule end-stimulated ATPases
AUTHOR(S): Walczak, Claire E.
CORPORATE SOURCE: Medical Sciences, Indiana University, Bloomington, IN, 47405, USA
SOURCE: Molecular Cell (2003), 11(2), 286-288
CODEN: MOCEFL; ISSN: 1097-2765
PUBLISHER: Cell Press
DOCUMENT TYPE: Journal; General Review
LANGUAGE: English
AB A review of the study by Hunter et al. (2003), which showed that the kin I MCAK is a microtubule (MT) end-stimulated ATPase that can catalytically depolymerize MTs.

L5 ANSWER 6 OF 17 CAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2000:578755 CAPLUS
DOCUMENT NUMBER: 133:306729
TITLE: AAA domains and organization of the dynein motor unit
AUTHOR(S): King, Stephen M.
CORPORATE SOURCE: Department of Biochemistry, University of Connecticut Health Center, Farmington, CT, 06032-3305, USA
SOURCE: Journal of Cell Science (2000), 113(14), 2521-2526
CODEN: JNCSAI; ISSN: 0021-9533
PUBLISHER: Company of Biologists Ltd.
DOCUMENT TYPE: Journal; General Review
LANGUAGE: English
AB A review with 47 refs. Dyneins contain one-three microtubule motor units that are each derived from the C-terminal globular head of a heavy chain. The N-terminal regions of the heavy chains form stems that are required for intra-dynein assocns. The microtubule-binding sites are located at the terminus of a short stalk that emanates from each globular head. Recent electron microscopic anal. indicates that the dynein head has a heptameric toroidal organization. This finding is echoed by the identification of six AAA (ATPases associated with cellular activities) domains and a seventh unrelated unit within this heavy chain region. At least two of these AAA domains can bind nucleotide, although only one appears able to hydrolyze ATP. Several other AAA domain proteins exhibit a similar annular organization of six AAA units. Detailed structural information is available for several AAA proteins, including N-ethylmaleimide-sensitive vesicle-fusion protein and the RuvB motor involved in DNA migration and resolution of Holliday junctions. The resulting structural parallels allow intriguing predictions to be made concerning dynein organization and motor function.
REFERENCE COUNT: 47 THERE ARE 47 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

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FULL ESTIMATED COST	24.55	124.01

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FULL ESTIMATED COST	1.62	125.63

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